DEQ AIR QUALITY PROGRAM
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Air Permit Hotline – 877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	Frazier Industrial Company
2. Facility Name (if different than #1)	Pocatello
3. Facility I.D. No.	005-00057
4. Brief Project Description:	Manufacturer of Structural Steel Storage Systems
FACILITY INFORMATION	
5. Owned/operated by: (√ if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Jay Settle, General Manager
7. Telephone Number and Email Address	434-262-2242 jsettle@frazier.com
8. Alternate Facility Contact Person/Title	Paul Anderson
9. Telephone Number and Email Address	208-201-1950 panderson@frazier.com
10. Address to which permit should be sent	3770 Poleline Road, Bldg 38
11. City/State/Zip	Pocatello, ID 83201
12. Equipment Location Address (if different than #9)	
13. City/State/Zip	
14. Is the Equipment Portable?	☐ Yes ☒ No
15. SIC Code(s) and NAISC Code	Primary SIC: 2542 Secondary SIC (if any): NAICS: 337215
16. Brief Business Description and Principal Product	Manufacturer of Structural Steel Storage Systems
17. Identify any adjacent or contiguous facility that this company owns and/or operates	
PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☐ New Facility ☐ New Source at Existing Facility ☐ Modify Existing Source: Permit No.:_____ Date Issued:_____ ☒ Unpermitted Existing Source: ☒ Required by Enforcement Action: Case No.: E-070016
CERTIFICATION	
IN ACCORDANCE WITH IDAPA 58.01.01.123 (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.	
19. Responsible Official's Name/Title	Jay Settle
20. RESPONSIBLE OFFICIAL SIGNATURE	Date: 9/15/08
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.	

Permit to Construct Application

Frazier Industrial Company

Prepared for:
Frazier Industrial Company
3770 Poleline Road
Pocatello, ID 83201

Prepared by:
JBR Environmental Consultants, Inc.
7669 West Riverside Drive, Suite 101
Boise, ID 83714

January 2008

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APPENDIXES

1.0 PROCESS DESCRIPTION

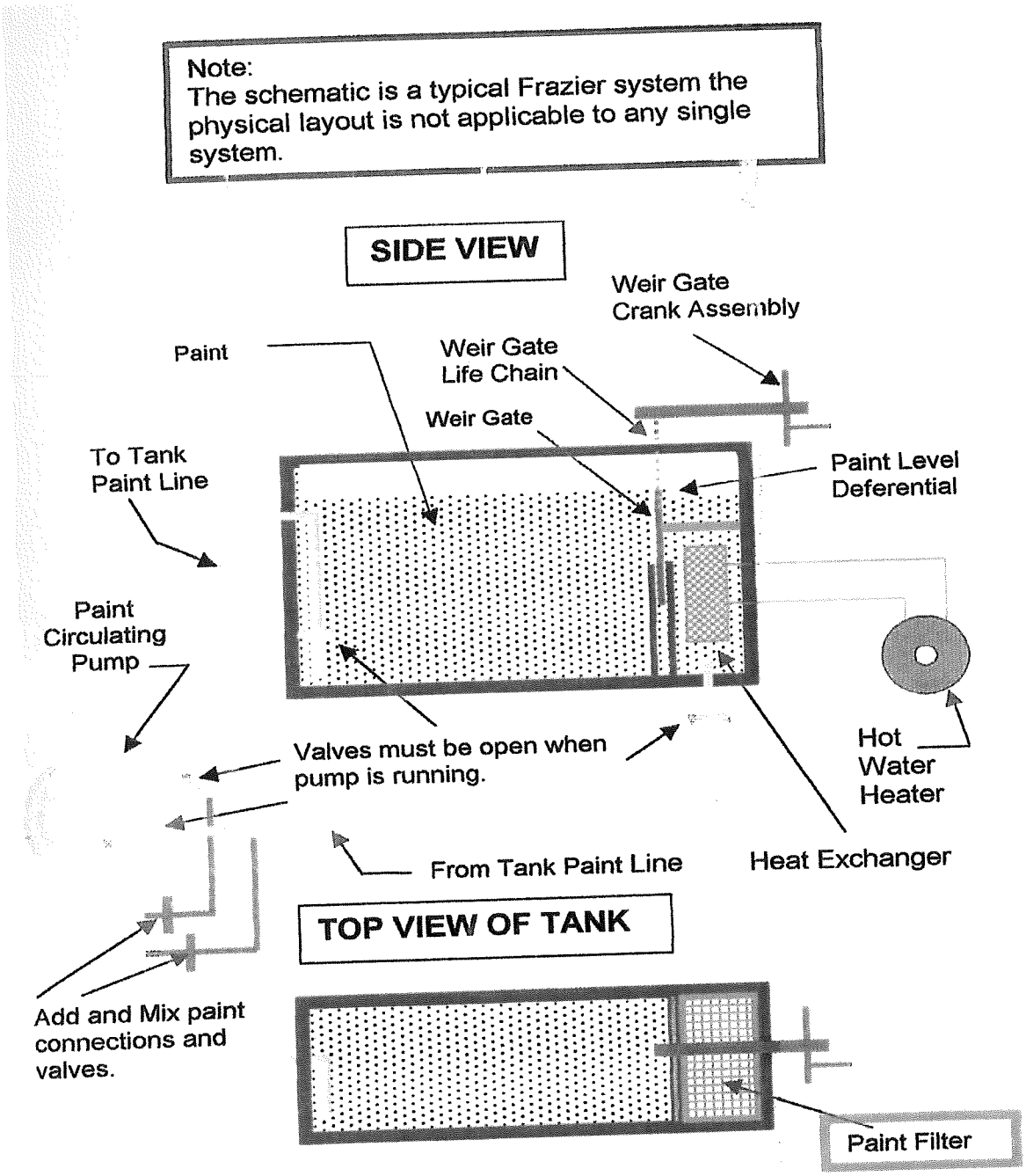
Frazier Industrial Company manufactures structural steel storage systems. At the Pocatello facility steel is delivered to the facility and is then cut and welded into product components. The type of welding conducted at the facility is metal inert gas welding with a carbon steel ER70S-3 electrode. The welded steel components are then bundled and prepared to be coated with paint.

The steel components are coated using a dip tank paint system consisting of three large rectangular steel tanks used to contain the paint. Tank 1 (1,300 gal) and Tank 2 (1,650 gal) contain orange paint and Tank 3 (4,800 gal) contains blue paint. Frazier also has the capability of coating its steel components with yellow paint. The yellow paint is only used approximately once a year for special orders and is usually placed in Tank 2 after it has been fully cleaned out. Each dip tank system is internally fabricated. The dip tank system is capable of keeping the paint mixed, filtered and within a predetermined temperature. Figure 1 below shows the dip tank configuration.

Aromatic 100 solvent is stored in one (1) 330 gallon metal mobile storage tote. The solvent is added to the dip tanks to obtain the desired paint viscosity. The solvent is also occasionally used to clean paint from rollers, scrapers and other tools used in the painting operation. The solvent that is used for cleaning is recycled back into the process by being mixed in the dip tanks when needed. The orange, blue, and yellow paint is also stored in metal mobile totes prior to being placed in the dip tanks. Each storage tote is approximately 330 gallons and there are approximately six (6) blue paint totes, four (4) orange paint totes and fourteen (14) yellow paint totes. Each tote and dip tank lid is closed when not in use. The dip tank is open when steel is dipped and is closed when not in use. The facility utilizes a wall exhaust fan to provide building ventilation. The exhaust fan does not control emissions from the building.

Steel components are typically dipped and kept in the dip tank for a minimum of two minutes. Once the steel components are coated they are hoisted out of the tank and allowed to drain for approximately 25 minutes. Next, a nap paint roller is used to smooth out any excess paint and coat unpainted surfaces. The painted steel components are then sent to the storage area where the finished product is stored until it is shipped to the customer. The maximum hours of operation is based on 16 hr per day, 7 days per week for 52 weeks per year (5,824 hr/yr). Normal operating hours are 16 hr per day for 5 days and occasionally one 8 hr shift for one additional day per week (4,576 hr/yr).

Figure 1- Dip Tank Configuration



1.1 Equipment List

Included in Appendix B is a scaled plot plan which identifies all equipment that is requested to be included in the PTC permit. Included in Appendix C are the PTC application forms which describe in detail all equipment that is requested to be included in the PTC permit.

2.0 REGULATORY APPLICABILITY

A review of state and local air quality regulations has been conducted and each regulation is described in the following sections. Included in Appendix C is the completed federal regulatory applicability PTC form.

2.1 National Ambient Air Quality Standards (NAAQS)

Primary National Ambient Air Quality Standards (NAAQS) are identified in 40 CFR Part 50 and define levels of air quality, which the United States Environmental Protection Agency (USEPA) deems necessary to protect the public health. Secondary NAAQS define levels of air quality, which the USEPA judges necessary to protect public welfare from any known, or anticipated, adverse effects of a pollutant. Examples of public welfare include protecting wildlife, buildings, national monuments, vegetation, visibility, and property values from degradation due to excessive emissions of criteria pollutants.

Specific standards for the following pollutants have been promulgated by USEPA: PM10, SO2, NOx, CO, ozone, and lead. The Frazier facility emits PM10, and VOCs, a precursor to ozone. The facility is a minor source with respect to PSD and Title V as it will not exceed any major source thresholds.

2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

Two sets of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) may potentially apply to the Frazier facility. The first NESHAP regulations were developed under the auspices of the original CAA. These standards are codified in 40 CFR Part 61, and address a limited number of pollutants and industries. 40 CFR Part 61 regulations do not apply to this planned facility.

Newer regulations are codified in 40 CFR Part 63 under the authority of the 1990 Clean Air Act Amendments (CAAA). These standards regulate HAP emissions from specific source categories and typically affect only major sources of HAPs. Part 63 regulations are frequently called Maximum Achievable Control Technology (MACT) standards. Major HAP sources have the PTE 10 tpy or more of any single HAP or 25 tpy or more of all combined HAP emissions. It was recently determined per NOV Case No. E-070016 that as of December 31, 2003 Frazier became a major source for Hazardous Air Pollutants (HAPs). Based on past Potential to Emit (PTE) levels Frazier is subject to the provisions of 40 CFR 63 Subpart MMMM-National Emission Standards for Surface Coating of Miscellaneous Metal parts and Products. Although Frazier was a major source of HAPs as of 2003, the current PTE is less than major source levels. Since 2003 Frazier has changed several of their coatings to low-HAP equivalent coatings. The HAPs emitted from this facility include xylene, toluene, ethyl benzene and cumene.

2.2.1 40 CFR Part 63, Subpart MMMM

Surface Coating of Miscellaneous Metal Parts and Products– Options and Requirements

Background/Applicability

Subpart MMMM establishes NESHAP for surface coating of miscellaneous metal parts and products. The following citations are the criteria for determining applicability:

> §63.3881 (a) Miscellaneous metal parts and products include, but are not limited to, metal components of the following types of products as well as the products themselves: motor vehicle parts and accessories, bicycles and sporting goods, recreational vehicles, extruded aluminum structural components, railroad cars, heavy duty trucks, medical equipment, lawn and garden equipment, electronic equipment, magnet wire, steel drums, industrial machinery, metal pipes, and numerous other industrial, household, and consumer products.
>
> §63.3881 (b), you are subject to this subpart if you own or operate a new, reconstructed, or existing affected source that uses 250 gallons per year or more, of coatings that contain hazardous air pollutants (HAP) in the source category defined in paragraph §63.3881 (a) and that is a major source, is located at a major source, or is part of a major source of emissions of HAPs.

Although Frazier currently is not a major source for HAPs, it had the potential to emit greater than 10 tons of xylene for the years 2003 to 2006. Beginning in 2007 Frazier has reduced xylene emission to less than 10 tpy. The Idaho DEQ informed Frazier that the MACT "once in, always in" provision applies, even though the initial compliance period and future xylene emissions are less than 10 tpy. The emission sources at Frazier's Pocatello facility which are subject to this subpart are three dip tanks which are used to coat steel parts and products.

Options & Requirements

EPA has designed three options for demonstrating compliance with Subpart MMMM. Any of the compliance options may be applied to an individual coating operation or to multiple coating operations as a group or to the entire facility. All three compliance options have the same HAP emission limit of 2.6 lb HAP/gal Solid. The three compliance options are as follows:

- Compliant Material Option
- Emission Rate Without Add-On Controls Option
- Emission Rate With Add-On Controls Option

Frazier has chosen Option 2- emission rate without add-on controls to demonstrate compliance.

Emission Rate Without Add-On Controls Option

To demonstrate initial compliance using the emission rate without add-on control option, Frazier's facility-wide coating operations or group of coating operations must meet the applicable emission limit of 2.6 lb HAP/gal solid.

This option is based on the HAP emissions of all the coating and materials used at the facility. Frazier's existing coatings have been calculated for HAP content and it was determined that the Blue and Orange paints meet the individual HAPs limit. However, the Univar Aromatic 100 solvent and Yellow paint exceed the individual HAPs limit of 2.6 lb HAP/gal solids. The emission rate without add-on control option calculates the emission rate as a rolling 12-month rate determined on a monthly basis. The emission rate is calculated based on Frazier's combined coating materials, i.e. an average. Below is a summary of the calculations used to demonstrate compliance which the applicable emissions limit of 2.6 lb HAP/gal solid.

FRAZIER - POCATELLO MACT INITIAL COMPLIANCE DEMONSTRATION

Coating	Gallons (gal/yr)	Density (lb/gal)	wt % HAPs	Vol% Solids	Total HAPs (lb/yr)	Total Solids (gal solids/yr)	HAP Emissions (lb HAPs /gal Solid)
Sheboygan Blue	15,725	10.36	0.0089	0.54	1,450	8,568	0.17
Aromatic 100	9,000	7.3	0.037	0.010	2,431	90	27.01
Yellow	500	9.16	0.18	0.554	824	277	2.98
Orange	18,637	10.40	0.02	0.55	4,049	10,239	0.40
				Total	**8,754**	**19,175**	**0.46**

MACT HAP Emission Limit (lb HAP/gal Solid)
2.6

2.3 State Rules

The Idaho Administrative Procedure Act (IDAPA) promulgates several emissions regulations that apply to Frazier in addition to those listed above.

2.3.1 NAAQS

IDAPA 58.01.01.203.02 establishes requirements for compliance with the NAAQS. According to the IDEQ Air Quality Modeling Guideline the modeling threshold, below which modeling is generally not required is 1.0 ton/yr for PM-10 emissions. Frazier believes that because the emission rate is below the modeling threshold and since the emissions are confined to the interior of the building the emissions will not significantly contribute to violating the NAAQS standard for PM-10.

2.3.2 Toxic Air Pollutants

IDAPA 58.01.01.585 and 586 establishes requirements for compliance with toxic air pollutants. Included in Appendix D is the modeling analyses conducted which demonstrates Frazier's compliance with the toxic air pollutant standards.

3.0 EMISSION SUMMARY

A summary of the potential emissions for the facility is presented in Table 3-1. Emission calculations have been completed for: PM10, VOCs and both individual and combined hazardous air pollutants. Detailed emission calculations are included in Appendix A. Permit application forms are included as Appendix C.

Table 3-1. Frazier Industrial Company PTE

PM_{10} (tpy)	VOC (tpy)	Individual HAP (tpy)	Combined HAP (tpy)
0.39	88.67	2.06	4.34

APPENDIX A

EMISSION CALCULATIONS

FRAZIER INDUSTRIAL COMPANY
PTE SUMMARY

Source	Paint Used	Pollutant					
		PM-10		VOC		HAPs	
		lb/hr	ton /yr	lb/hr	ton/yr	lb/hr	ton/yr
Dip Tank 1[a]	Orange + Solvent			8.81	25.66	0.48	1.40
Dip Tank 2[b]	Orange + Solvent or Yellow + Solvent			9.93	26.71	2.61	1.82
Dip Tank 3	Blue + Solvent			12.47	36.30	0.38	1.12
Welding	-	0.09	0.39				
TOTAL		**0.09**	**0.39**	**31.21**	**88.67**	**3.47**	**4.34**

[a] Solvent is used in all three tanks. Assumed total solvent emissions are divided equally between the three tanks.

[b] Yellow paint is occasionally used in Tank #2. Worst case total hourly emissions assumes yellow + solvent being used in Tank #2. Worst case annual tpy assumes orange and yellow + solvent being used in Tank #2.

Source	TAPs									
	n-Butyl Alcohol	Xylene	Eth Benz	Stoddard	Toluene	Cumene	Iron	Mang	Copper	Trimethyl Benzene
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
Dip Tank 1	0.42	0.23	0.12	na	na	na	na	na	na	1.55
Dip Tank 2	0.42	0.23	0.12	na	na	na	na	na	na	1.55
Dip Tank 3	na	na	na	na	na	na	na	na	na	2.81
Yellow	na	0.14	0.14	2.75	2.06	0.14	na	na	na	1.10
Solvent	na	0.24	na	na	na	0.16	na	na	na	3.50
Welding	na	na	na	na	na	na	0.02	2.0E-03	1.1E-04	na
TOTAL[c]	**0.83**	**0.84**	**0.37**	**2.75**	**2.06**	**0.30**	**0.02**	**0.002**	**0.0001**	**9.41**
EL (lb/hr)	10	29	29	35	25	16.3	0.333	0.067	0.013	8.2
EL Exceeded (Y/N)	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**Yes**

c Yellow paint is used in one of the three tanks. Worst case total max trimethyl benzene assumes Dip Tank 1, 2, and 3 with blue and orange paint and yellow not operating.

DIP TANK 1
POTENTIAL TO EMIT
VOC and HAP

Max VOC Coating:	Fast Dry Orange- High Solids
Coating ID:	43-62154
Density (lb/gal):	10.40
Hours of Operation (hr/yr):	5,824
Potential Gallons Mixture Applied (gal/yr)[b]:	9,318
Max Potential Gallons (gal/hr):	1.60

Volatile Component	CAS No.	Max Wt. Fraction	VOC Emissions (lb/hr)	VOC Emissions (T/yr)	HAP Emissions (lb/hr)	HAP Emissions (T/yr)	TAP Emissions (lb/hr)
1,2,4-Trimethylbenzene	95-63-6	0.093	1.55	4.52	na	na	1.55
n-Butyl Alcohol	71-36-3	0.025	0.42	1.21	na	na	0.42
Xylene (mixed isomers)	1330-20-7	0.0139	0.23	0.67	0.231	0.67	0.23
Ethyl Benzene	100-41-4	0.007	0.12	0.34	0.116	0.34	0.12
Other VOCs	108-67-8	0.1736	2.89	8.41	na	na	na
TOTAL [a]		0.31280	5.20	15.15	0.35	1.01	2.32

[a]Only non-exempt VOC, HAP and TAP components are summed.

[b]Total Orange Paint Usage is 18,636 gal/yr and is divided between Tanks #1 and #2

DIP TANK 2
POTENTIAL TO EMIT
VOC and HAP

Max VOC Coating:	Fast Dry Orange- High Solids
Coating ID:	43-62154
Density (lb/gal):	10.39
Hours of Operation (hr/yr):	5,824
Potential Gallons Mixture Applied (gal/yr)[b]:	9,318
Max Potential Gallons (gal/hr):	1.60

Volatile Component	CAS No.	Max Wt. Fraction	VOC Emissions (lb/hr)	VOC Emissions (T/yr)	HAP Emissions (lb/hr)	HAP Emissions (T/yr)	TAP Emissions (lb/hr)
1,2,4-Trimethylbenzene	95-63-6	0.093	1.55	4.52	na	na	1.55
n-Butyl Alcohol	71-36-3	0.025	0.42	1.21	na	na	0.42
Xylene (mixed isomers)	1330-20-7	0.014	0.23	0.67	0.23	0.67	0.23
Ethyl Benzene	100-41-4	0.007	0.12	0.34	0.12	0.34	0.12
Other VOCs	108-67-8	0.1736	2.89	8.41	na	na	na
	TOTAL [a]	0.31280	5.20	15.15	0.35	1.01	2.31

[a]Only non-exempt VOC, HAP and TAP components are summed.

[b]Total Orange Paint Usage is 18,636 gal/yr and is divided between Tanks #1 and #2

DIP TANK 3
POTENTIAL TO EMIT
VOC and HAP

Max VOC Coating:	New FD Blue- HS Dip
Coating ID:	43-41491B
Density (lb/gal):	10.36
Hours of Operation (hr/yr):	5,824
Potential Gallons Mixture Applied (gal/yr):	15,725
Max Potential Gallons (gal/hr):	2.70

Volatile Component	CAS No.	Max Wt. Fraction	VOC Emissions (lb/hr)	VOC Emissions (T/yr)	HAP Emissions (lb/hr)	HAP Emissions (T/yr)	TAP Emissions (lb/hr)
1,2,4-Trimethylbenzene	95-63-6	0.0995	2.78	8.10	na	na	2.78
n-Butyl Alcohol	71-36-3	0.026	0.73	2.13	na	na	0.73
1,3,5-Trimethylbenzene	108-67-8	0.001	0.03	0.08	na	na	0.03
Unspecified HAP		0.009	0.25	0.72	0.249	0.72	0.25
Other VOCs[b]		0.181	5.07	14.75	na	na	na
TOTAL[a]		0.317	8.86	25.80	0.25	0.72	3.79

[a]Only non-exempt VOC, HAP and TAP components are summed.

[b]Total volatile wt% from MSDS sheet=31.67

YELLOW PAINT
POTENTIAL TO EMIT
VOC and HAP

Max VOC Coating:	MDI Yellow H/S Enamel
Coating ID:	EH5182
Density (lb/gal):	9.16
Hours of Operation (hr/yr):	224
Potential Gallons Mixture Applied (gal/yr):	500
Max Potential Gallons (gal/hr):	1.50

Volatile Component	CAS No.	Max Wt. Fraction	VOC Emissions (lb/hr)	VOC Emissions (T/yr)	HAP Emissions (lb/hr)	HAP Emissions (T/yr)	TAP Emissions (lb/hr)
Mineral Spirits (Stoddard)	8052-41-3	0.200	2.75	0.46	na	na	2.75
Toluene	108-88-3	0.150	2.06	0.34	2.06	0.34	2.06
1,2,4-Trimethylbenzene	95-63-6	0.050	0.69	0.11	na	na	0.69
1,3,5-Trimethylbenzene	108-67-8	0.030	0.41	0.07	na	na	0.41
Cumene	98-82-8	0.010	0.14	0.02	0.137	0.02	0.14
Ethyl Benzene	100-41-4	0.010	0.14	0.02	0.137	0.02	0.14
Xylene	1330-20-7	0.010	0.14	0.02	0.137	0.02	0.14
TOTAL[a]		0.460	6.32	1.05	2.47	0.41	6.32

[a]Only non-exempt VOC, HAP and TAP components are summed.

SOLVENT MIXED IN TANKS
POTENTIAL TO EMIT
VOC and HAP

Max VOC Coating:	Aromatic 100 Fluid
Coating ID:	EQ940652
Density (lb/gal):	7.29
Hours of Operation (hr/yr):	5,824
Potential Gallons Mixture Applied (gal/yr):	8,736
Potential Gallons (gal/hr):	1.50

Volatile Component	CAS No.	Max Wt. Fraction	VOC Emissions (lb/hr)	VOC Emissions (T/yr)	HAP Emissions (lb/hr)	HAP Emissions (T/yr)	TAP Emissions (lb/hr)
1,2,4-Trimethylbenzene	95-63-6	0.320	3.50	10.19	na	na	3.50
Cumene	98-82-8	0.015	0.16	0.48	0.164	0.48	0.16
Xylene	1330-20-7	0.022	0.24	0.70	0.241	0.70	0.24
Other VOCs	108-67-8	0.633	6.92	20.16	na	na	na
TOTAL[a]		0.990	10.83	31.52	0.40	1.18	3.90

[a]Only non-exempt VOC, HAP and TAP components are summed.

Carbon Steel Electrode

Welding Wire Usage=	200,000	lb/yr
Welding Wire Usage=	34.34	lb/hr
PM Emission Factor=	0.0026	lb PM/lb electrode
Fume Emission Factor=	0.22	g/min

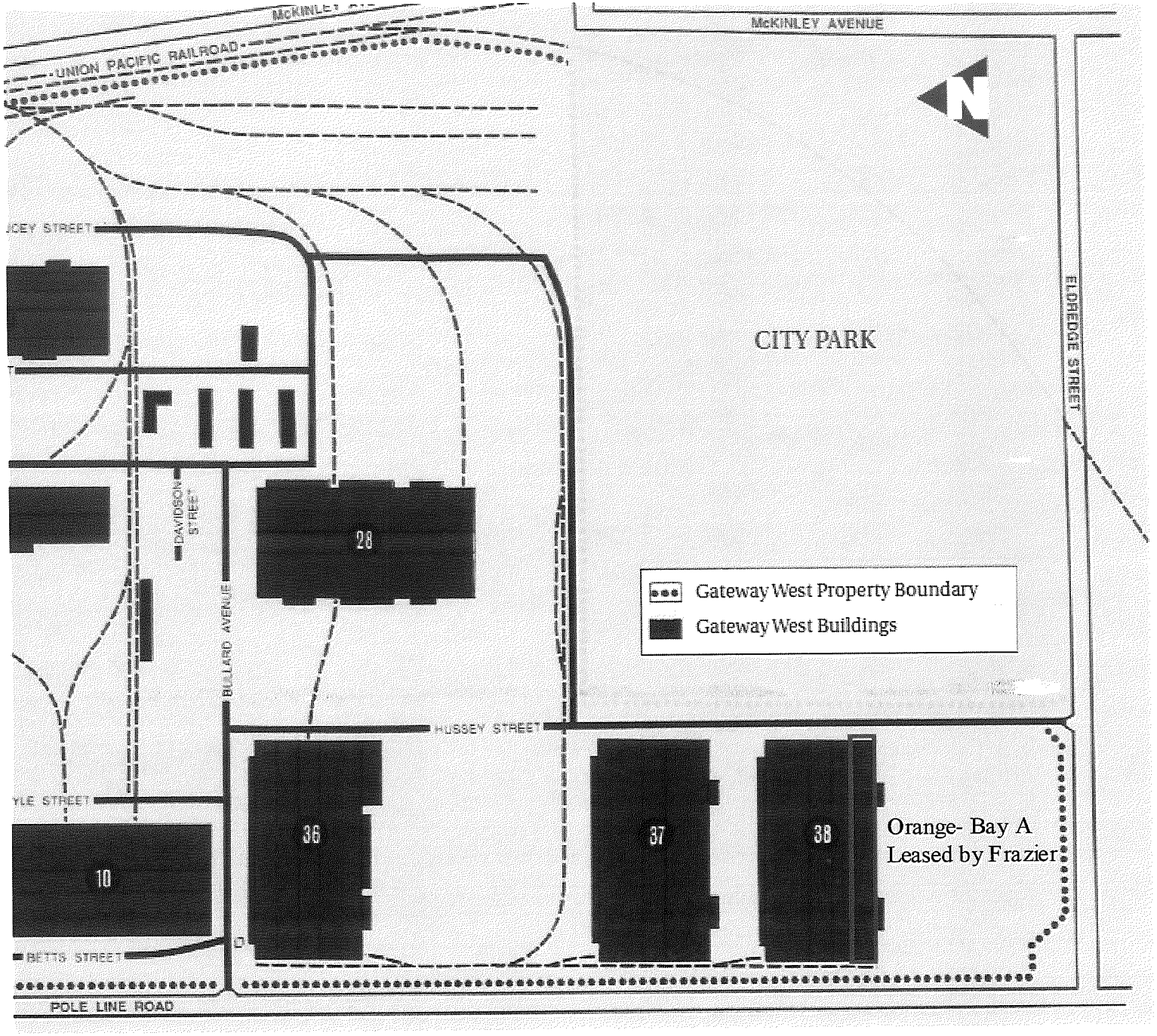
Component	CAS No.	Fume Chemistry	PM-10 Emissions[a] (lb/hr)	(tpy)	TAP Emissions (lb/hr)
Iron	7439-89-6	55%	0.089	0.391	0.016
Manganese	7439-96-5	6.9%	6.16E-06	2.70E-05	0.002
Copper	7440-50-8	0.39%	3.48E-07	1.53E-06	0.00011
		TOTAL	**0.089**	**0.391**	

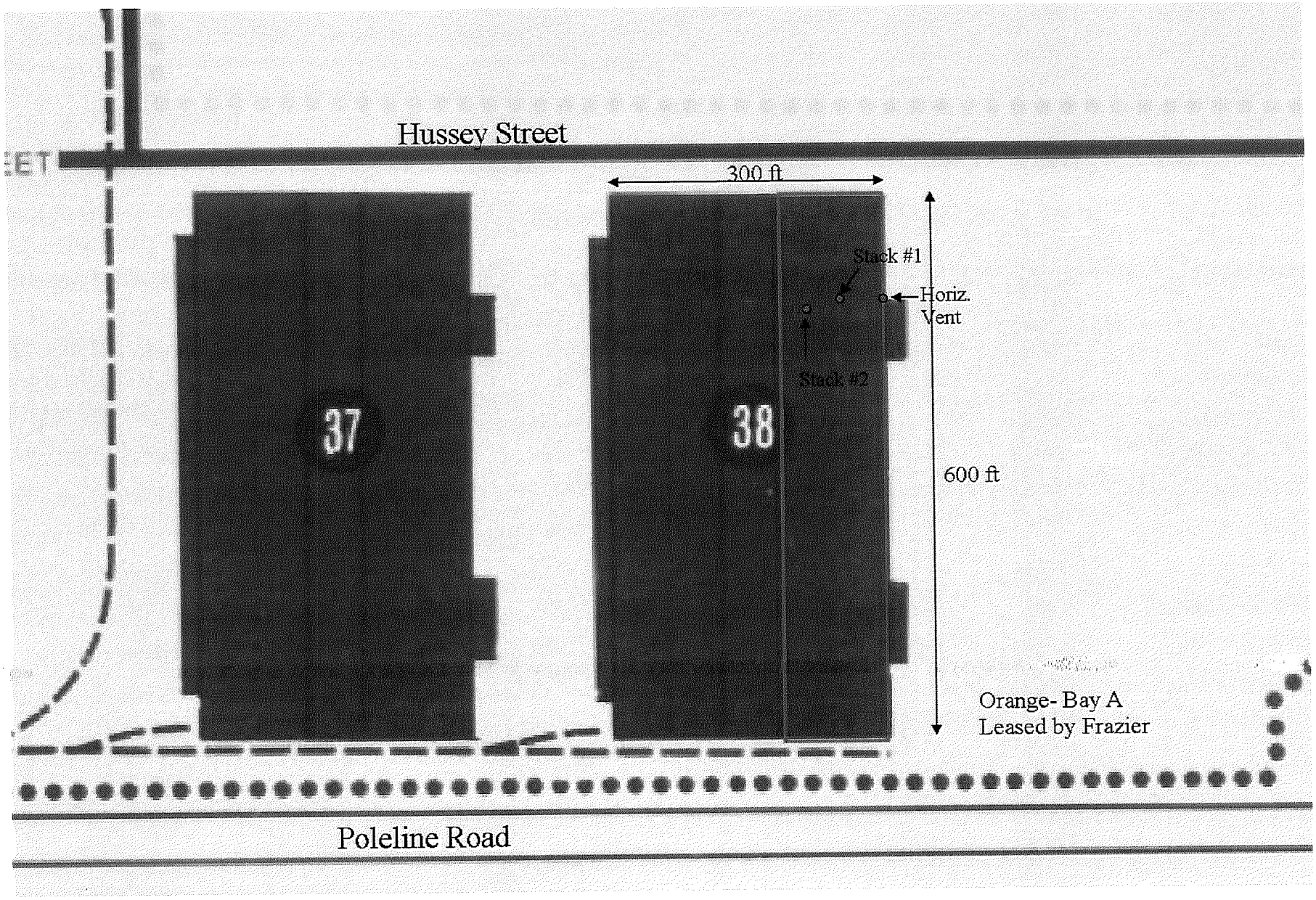
Manufacturer's Information/ MSDS

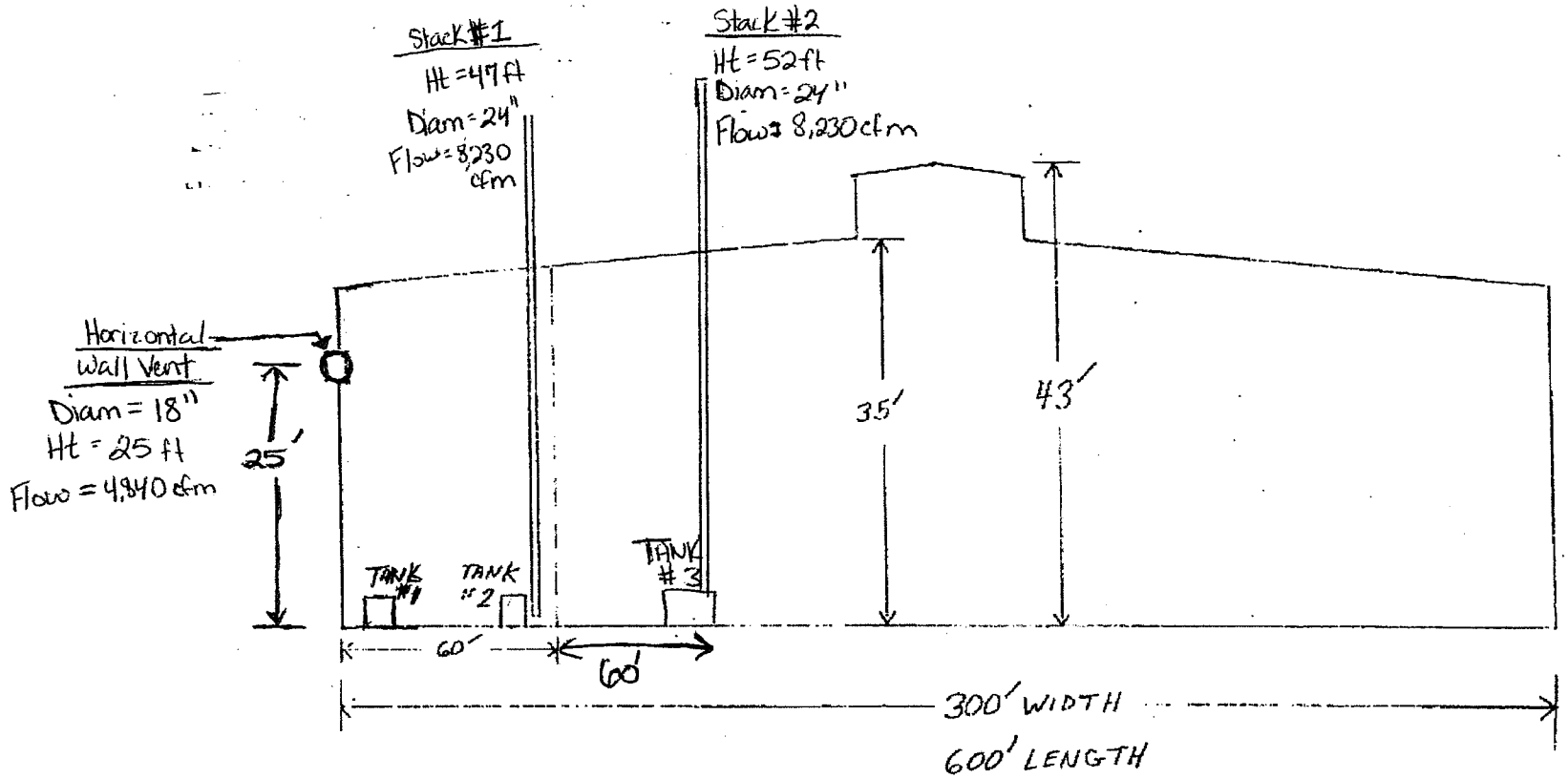
[a] Assume all particulate emissions are PM-10

APPENDIX B

SCALED PLOT PLAN


McKINLEY AVENUE
UNION PACIFIC RAILROAD
CITY PARK
ELDREDGE STREET
DAVIDSON STREET
BULLARD AVENUE
HUSSEY STREET
BETTS STREET
POLE LINE ROAD
28
36
37
38
10
Gateway West Property Boundary
Gateway West Buildings
Orange- Bay A
Leased by Frazier


Hussey Street
300 ft
Stack #1
Horiz.
Vent
Stack #2
37
38
600 ft
Orange- Bay A
Leased by Frazier
Poleline Road


Stack #1
Ht = 47 ft
Diam = 24"
Flow = 8,230 cfm
Stack #2
Ht = 52 ft
Diam = 24"
Flow = 8,230 cfm
Horizontal Wall Vent
Diam = 18"
Ht = 25 ft
Flow = 4,940 cfm
25'
35'
43'
TANK #1
TANK #2
TANK #3
60'
60'
300' WIDTH
600' LENGTH

APPENDIX C

PTC APPLICATION FORMS

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page 2 before filling out the form.

DEQ USE ONLY
Date Received
Project Number
Payment / Fees Included? Yes ☐ No ☐
Check Number

COMPANY NAME, FACILITY NAME, AND FACILITY ID NUMBER

1. Company Name	Frazier Industrial Company		
2. Facility Name	Pocatello	3. Facility ID No.	005-00057
4. Brief Project Description - One sentence or less	Manufacturer of Structural Steel Storage Systems		

PERMIT APPLICATION TYPE

5. ☐ New Facility ☐ New Source at Existing Facility ☒ Unpermitted Existing Source
☐ Modify Existing Source: Permit No.:_____
Date Issued:_____
☒ Required by Enforcement Action: Case No.: E-070016

6. ☒ Minor PTC ☐ Major PTC

FORMS INCLUDED

Included	N/A	Forms	DEQ Verify
☒	☐	Form GI – Facility Information	☐
☒	☐	Form EU0 – Emissions Units General __4__	☐
☐	☒	Form EU1 - Industrial Engine Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU2 - Nonmetallic Mineral Processing Plants Please Specify number of forms attached: _____	☐
☐	☒	Form EU3 - Spray Paint Booth Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU4 - Cooling Tower Information Please Specify number of forms attached: _____	☐
☐	☒	Form EU5 – Boiler Information Please Specify number of forms attached:	☐
☐	☒	Form HMAP – Hot Mix Asphalt Plant Please Specify number of forms attached: _____	☐
☐	☒	Form CBP - Concrete Batch Plant Please Specify number of forms attached: _____	☐
☐	☒	Form BCE - Baghouses Control Equipment	☐
☐	☒	Form SCE - Scrubbers Control Equipment	☐
☒	☐	Forms EI-CP1 - EI-CP4 - Emissions Inventory– criteria pollutants (Excel workbook, all 4 worksheets)	☐
☒	☐	PP – Plot Plan	☐
☒	☐	Forms MI1 – MI4 – Modeling (Excel workbook, all 4 worksheets)	☐
☒	☐	Form FRA – Federal Regulation Applicability	☐

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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Air Permit Hotline – 877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page 2 before filling out the form.

All information is required. If information is missing, the application will not be processed.

IDENTIFICATION	
1. Company Name	Frazier Industrial Company
2. Facility Name (if different than #1)	Pocatello
3. Facility I.D. No.	005-00057
4. Brief Project Description:	Manufacturer of Structural Steel Storage Systems
FACILITY INFORMATION	
5. Owned/operated by: (√ if applicable)	☐ Federal government ☐ County government ☐ State government ☐ City government
6. Primary Facility Permit Contact Person/Title	Jay Settle, General Manager
7. Telephone Number and Email Address	434-262-2242 jsettle@frazier.com
8. Alternate Facility Contact Person/Title	Paul Anderson
9. Telephone Number and Email Address	208-201-1950 panderson@frazier.com
10. Address to which permit should be sent	3770 Poleline Road, Bldg 38
11. City/State/Zip	Pocatello, ID 83201
12. Equipment Location Address (if different than #9)	
13. City/State/Zip	
14. Is the Equipment Portable?	☐ Yes ☒ No
15. SIC Code(s) and NAISC Code	Primary SIC: 2542 Secondary SIC (if any): NAICS: 337215
16. Brief Business Description and Principal Product	Manufacturer of Structural Steel Storage Systems
17. Identify any adjacent or contiguous facility that this company owns and/or operates	
PERMIT APPLICATION TYPE	
18. Specify Reason for Application	☐ New Facility ☐ New Source at Existing Facility ☐ Modify Existing Source: Permit No.:_____ Date Issued:_____ ☒ Unpermitted Existing Source: ☒ Required by Enforcement Action: Case No.: E-070016
CERTIFICATION	
IN ACCORDANCE WITH IDAPA 58.01.01.123 (RULES FOR THE CONTROL OF AIR POLLUTION IN IDAHO), I CERTIFY BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION IN THE DOCUMENT ARE TRUE, ACCURATE, AND COMPLETE.	
19. Responsible Official's Name/Title	Jay Settle
20. RESPONSIBLE OFFICIAL SIGNATURE	Date: 9/15/08
21. ☒ Check here to indicate you would like to review a draft permit prior to final issuance.	

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Frazier Industrial Company	Pocatello	005-00057
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	DIP TANK #1
2. EU ID Number:	T01
3. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	Internally Fabricated
5. Model:	Internally Fabricated
6. Maximum Capacity:	1,300 GALLONS
7. Date of Construction:	MARCH 1996
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	5,824 HR/YR
19. Maximum Operation	8,760 HR/YR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☒ Material Usage Limit(s):	18,636 GAL/YR TOTAL ORANGE PAINT and 500 GAL/YR YELLOW BETWEEN TANKS #1 AND #2 FACILITY WIDE 8,736 GAL/YR AROMATIC
☐ Limits Based on Stack Testing	
☐ Other:	
21. Rationale for Requesting the Limit(s):	MAXIMUM PROJECTED PAINT AND SOLVENT USAGE

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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PERMIT TO CONSTRUCT APPLICATION

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Please see instructions on page before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Frazier Industrial Company	Pocatello	005-00057
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	DIP TANK #2
2. EU ID Number:	T02
3. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	Internally Fabricated
5. Model:	Internally Fabricated
6. Maximum Capacity:	1,650 GALLONS
7. Date of Construction:	MARCH 1996
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	5,824 HR/YR
19. Maximum Operation	8,760 HR/YR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☒ Material Usage Limit(s):	18,636 GAL/YR TOTAL ORANGE PAINT and 500 GAL/YR YELLOW BETWEEN TANKS #1 AND #2 FACILITY WIDE 8,736 GAL/YR AROMATIC
☐ Limits Based on Stack Testing	
☐ Other:	
21. Rationale for Requesting the Limit(s):	MAXIMUM PROJECTED PAINT AND SOLVENT USAGE

DEQ AIR QUALITY PROGRAM
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PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Frazier Industrial Company	Pocatello	005-00057
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	DIP TANK #3
2. EU ID Number:	T03
3. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	Internally Fabricated
5. Model:	Internally Fabricated
6. Maximum Capacity:	4,800 GALLONS
7. Date of Construction:	2004
8. Date of Modification (if any)	
9. Is this a Controlled Emission Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	5,824 HR/YR
19. Maximum Operation	8,760 HR/YR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☒ Material Usage Limit(s):	15,725 GAL/YR BLUE PAINT AND FACILITY WIDE 8,736 GAL/YR AROMATIC
☐ Limits Based on Stack Testing	
☐ Other:	
21. Rationale for Requesting the Limit(s):	MAXIMUM PROJECTED PAINT AND SOLVENT USAGE

Emissions Unit - General **Form EU0**

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
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PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

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IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Frazier Industrial Company	Pocatello	005-00057
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

EMISSIONS UNIT (PROCESS) IDENTIFICATION & DESCRIPTION

1. Emissions Unit (EU) Name:	STEEL WELDING
2. EU ID Number:	W01
3. EU Type:	☐ New Source ☒ Unpermitted Existing Source ☐ Modification to a Permitted Source -- Previous Permit #: Date Issued:
4. Manufacturer:	
5. Model:	L-50 CARBON STEEL ELECTRODE
6. Maximum Capacity:	200,000 LB/YR WELDING ELECTRODE
7. Date of Construction:	MARCH 1996
8. Date of Modification (if any)	
9. Is this a Controlled Unit?	☒ No ☐ Yes If Yes, Complete the following section. If No, go to line 18.

EMISSIONS CONTROL EQUIPMENT

10. Control Equipment Name and ID:			
11. Date of Installation:		12. Date of Modification (if any):	
13. Manufacturer and Model Number:			
14. ID(s) of Emission Unit Controlled:			
15. Is operating schedule different than emission units(s) involved?:	☐ Yes ☐ No		
16. Does the manufacturer guarantee the control efficiency of the control equipment?	☐Yes ☐No (If yes, attach and label manufacturer guarantee)		

	Pollutant Controlled					
	PM	PM10	SO_2	NOx	VOC	CO
Control Efficiency						

17. If manufacturer's data is not available, attach a separate sheet of paper to provide the control equipment design specifications and performance data to support the above mentioned control efficiency.

EMISSION UNIT OPERATING SCHEDULE (hours/day, hours/year, or other)

18. Actual Operation	5,824 HR/YR
19. Maximum Operation	8,760 HR/YR

REQUESTED LIMITS

20. Are you requesting any permit limits?	☒ Yes ☐ No (If Yes, check all that apply below)
☐ Operation Hour Limit(s):	
☐ Production Limit(s):	
☒ Material Usage Limit(s):	200,000 LB/YR WIRE ELECTRODE
☐ Limits Based on Stack Testing	
☐ Other:	
21. Rationale for Requesting the Limit(s):	MAXIMUM PROJECTED USAGE

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 877-5PERMIT

PERMIT TO CONSTRUCT APPLICATION

Revision 1
01/11/07

Please see instructions on page before filling out the form.

IDENTIFICATION		
Company Name: Frazier Industrial Company	Facility Name: Pocatello	Facility ID No: 005-00057
Brief Project Description: Manufacturer of Structural Steel Storage Systems		

APPLICABILITY DETERMINATION	
Will this project be subject to 1990 CAA Section 112(g)? (Case-by-Case MACT)	☒ NO ☐ YES* * If YES then applicant must submit an application for a case-by-case MACT determination [IAC 567 22-1(3)"b" (8)]
Will this project be subject to a New Source Performance Standard? (40 CFR part 60)	☒ NO ☐ YES* *If YES please identify sub-part:
Will this project be subject to a MACT (Maximum Achievable Control Technology) regulation? (40 CFR part 63) THIS ONLY APPLIES IF THE PROJECT EMITS A HAZARDOUS AIR POLLUTANT	☐ NO ☒ YES* *If YES please identify sub-part: MMMM
Will this project be subject to a NESHAP (National Emission Standards for Hazardous Air Pollutants) regulation? (40 CFR part 61)	☒ NO ☐ YES* *If YES please identify sub-part: ____
Will this project be subject to PSD (Prevention of Significant Deterioration)? (40 CFR section 52.21)	☒ NO ☐ YES
Was netting done for this project to avoid PSD?	☒ NO ☐ YES* *If YES please attach netting calculations
If you are unsure how to answer any of these questions call the Air Permit Hotline at 877-5PERMIT	

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton Boise, ID 83706 **For assistance: (208) 373-0502**	**PERMIT TO CONSTRUCT APPLICATION**

Company Name:	**Frazier Industrial Company**
Facility Name:	Pocatello
Facility ID No.:	05-00057
Brief Project Description:	Manufacturer of Structural Steel Storage Systems

SUMMARY OF EMISSIONS INCREASE (PROPOSED PTE - PREVIOUSLY MODELED PTE) - POINT SOURCES

1.	2.	3.											
		PM_{10}		SO_2		NO_X		CO		VOC		Lead	
Emissions units	Stack ID	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Source(s)													
Dip Tank #1	HV01									8.81	25.66		
Dip Tank #2	S01									9.93	26.71		
Dip Tank #3	S02									12.47	36.30		
Steel Welding	HV01	0.09	0.39										
(insert more rows as needed)													
Total		0.09	0.39							31.21	88.67		

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton Boise, ID 83706 **For assistance: (208) 373-0502**	**PERMIT TO CONSTRUCT APPLICATION**
Company Name:	Frazier Industrial Company	
Facility Name:		
Facility ID No.:	05-00057	
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

SUMMARY OF AIR IMPACT ANALYSIS RESULTS - CRITERIA POLLUTANTS

		1.		2.	3.	4.		5.
Criteria Pollutants	**Averaging Period**	**Significant Impact Analysis Results (µg/m3)**	**Significant Contribution Level (µg/m3)**	**Full Impact Analysis Results (µg/m3)**	**Background Concentration (µg/m3)**	**Total Ambient Impact (µg/m3)**	**NAAQS (µg/m3)**	**Percent of NAAQS**
PM_{10}	24-hour	below model thresholds	5	-	-	-	150	-
	Annual	below model thresholds	1	-	-	-	50	-
SO_2	3-hr	na	25	-	-	-	1300	-
	24-hr	na	5	-	-	-	365	-
	Annual	na	1	-	-	-	80	-
NO_2	Annual	na	1	-	-	-	100	-
CO	1-hr	na	2000	-	-	-	10000	-
	8-hr	na	500	-	-	-	40000	-

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton Boise, ID 83706 **For assistance: (208) 373-0502**	**PERMIT TO CONSTRUCT APPLICATION**
Company Name:	Frazier Industrial Company	
Facility Name:	Pocatello Facility	
Facility ID No.:	05-00057	
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

POINT SOURCE STACK PARAMETERS

1.	2.	3a.	3b.	4.	5.	6.	.7	8.	9.	10.
Emissions units	**Stack ID**	**UTM Easting (m)**	**UTM Northing (m)**	**Base Elevation (m)**	**Stack Height (m)**	**Modeled Diameter (m)**	**Stack Exit Temperature (K)**	**Stack Exit Flowrate (acfm)**	**Stack Exit Velocity (m/s)**	**Stack orientation (e.g., horizontal, rain cap)**
Point Source(s)										
Dip Tank #1	HV01	380474.1	4750347.8	1,359.00	7.62	0.001	ambient	4,840.00	0.001	Horizontal
Dip Tank #2	S01	380474.1	4750352	1,359.00	14.33	0.61	ambient	8,230.00	13.30	Vertical
Dip Tank #3	S02	380462.4	4650373	1,359.00	15.85	0.61	ambient	8,230.00	13.30	Vertical

	DEQ AIR QUALITY PROGRAM 1410 N. Hilton Boise, ID 83706 **For assistance: (208) 373-0502**	**PERMIT TO CONSTRUCT APPLICATION**
Company Name:	Frazier Industrial Company	
Facility Name:	Pocatello Facility	
Facility ID No.:	05-00057	
Brief Project Description:	Manufacturer of Structural Steel Storage Systems	

BUILDING AND STRUCTURE INFORMATION

1.	2.	3.	4.	5.	6.	7.
Building ID Number	**Length (ft)**	**Width (ft)**	**Base Elevation (m)**	**Building Height (m)**	**Number of Tiers**	**Description/Comments**
Building 38	600.00	300.00	1359.00	13.10	2	
(insert more rows as needed)						

APPENDIX D

MODELING ANALYSIS

Air Quality Modeling Report
Frazier Industrial Company

January 2008

1.0 Purpose

Frazier Industrial is located in warehouse 38 off Hussey Street in Pocatello, Idaho. This report describes the analysis estimating impacts of facility air pollutant emissions and the increase in Toxic Air Pollutants (TAPs) emissions on ambient air quality impact as a result of the proposed action.

This analysis shows that the ambient air impacts of air pollutants emitted above IDEQ modeling thresholds do not approach applicable impact limits. The facility's emission inventory shows potential criteria pollutant emissions are below IDEQ modeling thresholds. Analyses were also prepared for the only TAP with increased in potential emissions over IDAPA 58.01.01 Sections 585 or 586 emission level (EL) thresholds to demonstrate that the increase of emissions as a result of the proposed action would not lead to ambient air quality impacts above IDAPA 58.01.01 Section 585 Acceptable Ambient Concentrations (AAC) or Section 586 Acceptable Ambient Concentrations for Carcinogens (AACC) impact limits. Air dispersion modeling was conducted in accordance with EPA's *Guideline on Air Quality Models* and IDEQ's *Air Quality Modeling Guideline*, consistent with the modeling protocol approved by IDEQ on January 14, 2008.

1.1 Model Description / Justification

The model chosen was SCREEN3, the United States Environmental Protection Agency (USEPA)–approved screening air dispersion model. SCREEN3 is the simplest and most conservative of the air quality models in EPA guidance and is the appropriate of the EPA-approved models given that compliance with the applicable limits can be shown easily with this screening model. SCREEN3's building downwash algorithm was applied in estimating the facility's ambient air impacts. The model was applied as recommended in EPA's *Guideline on Air Quality Models* (2001) consistent with State of Idaho Air Quality Modeling Guideline and the conditions of the IDEQ Modeling Protocol approval.

1.2 Facility Emissions

As discussed in Section 1.0, the potential to emit documented in the emission inventory is below IDEQ modeling thresholds for all criteria pollutants. No IDAPA 586 TAP has potential emissions reaching or exceeding applicable IDAPA ELs. One IDAPA 585 TAP, Tri methylbenzene, has potential emissions exceeding applicable IDAPA ELs. The facility's PTE for tri methylbenzene is 9.41 lbs/hr, slightly above the IDAPA 585 EL of 8.2 lbs/hr. This analysis shows that those potential emissions will lead to maximum ambient air impacts well below the IDAPA 585 AAC for that TAP of 6150 $\mu g/m^3$, 24 hour average.

1.3 Model Source Data

The Tri methylbenzene emissions come from venting of indoor emissions from three tanks, and use of paint containing the TAP within the facility. There are three sources that the TAP could vent from the building, two stacks and one horizontal wall vent. Figure 1 shows a cross section view of the location of the tanks within the building and venting possibilities.

Figure 1 Building TAP sources and Vents

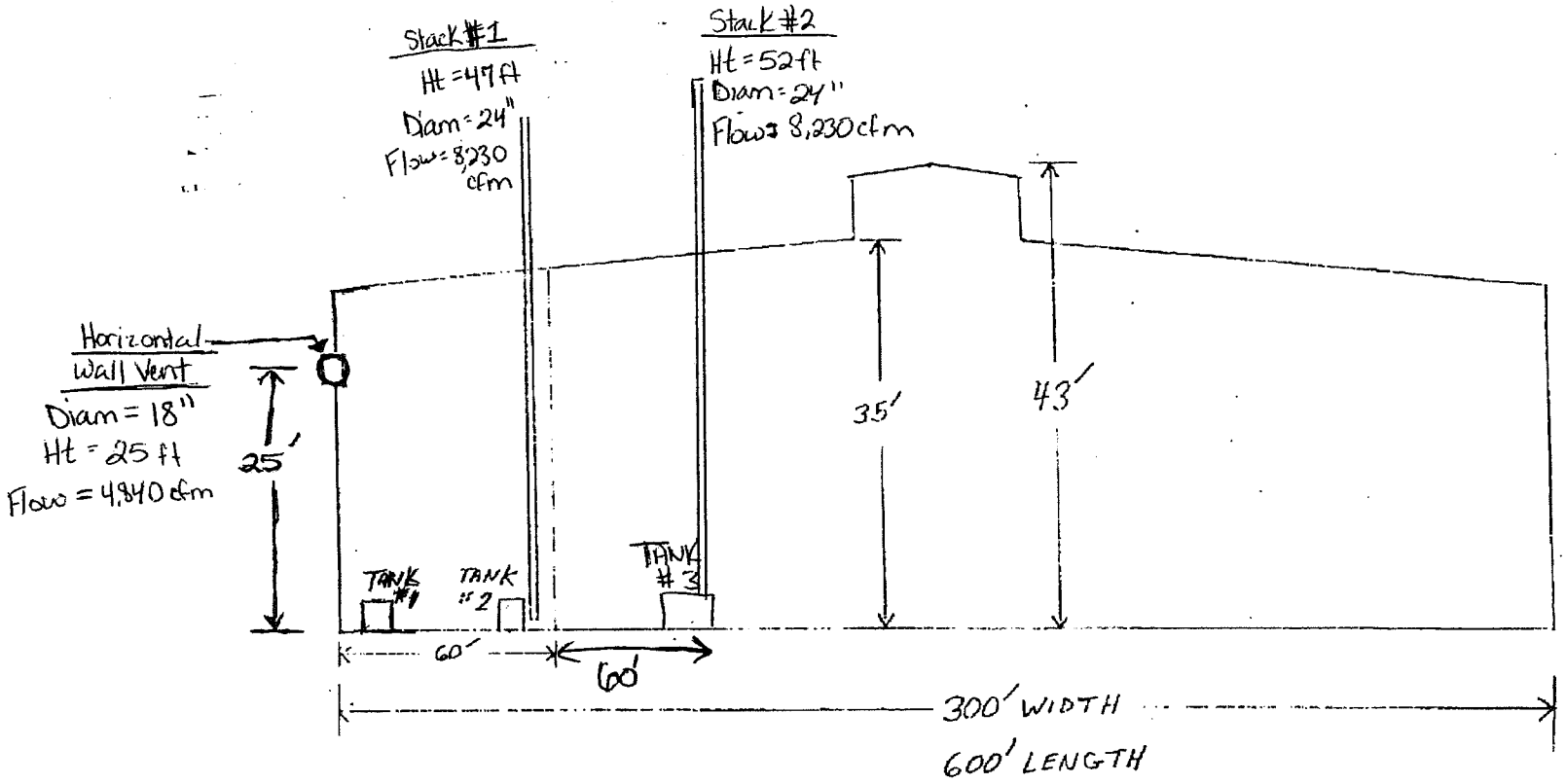
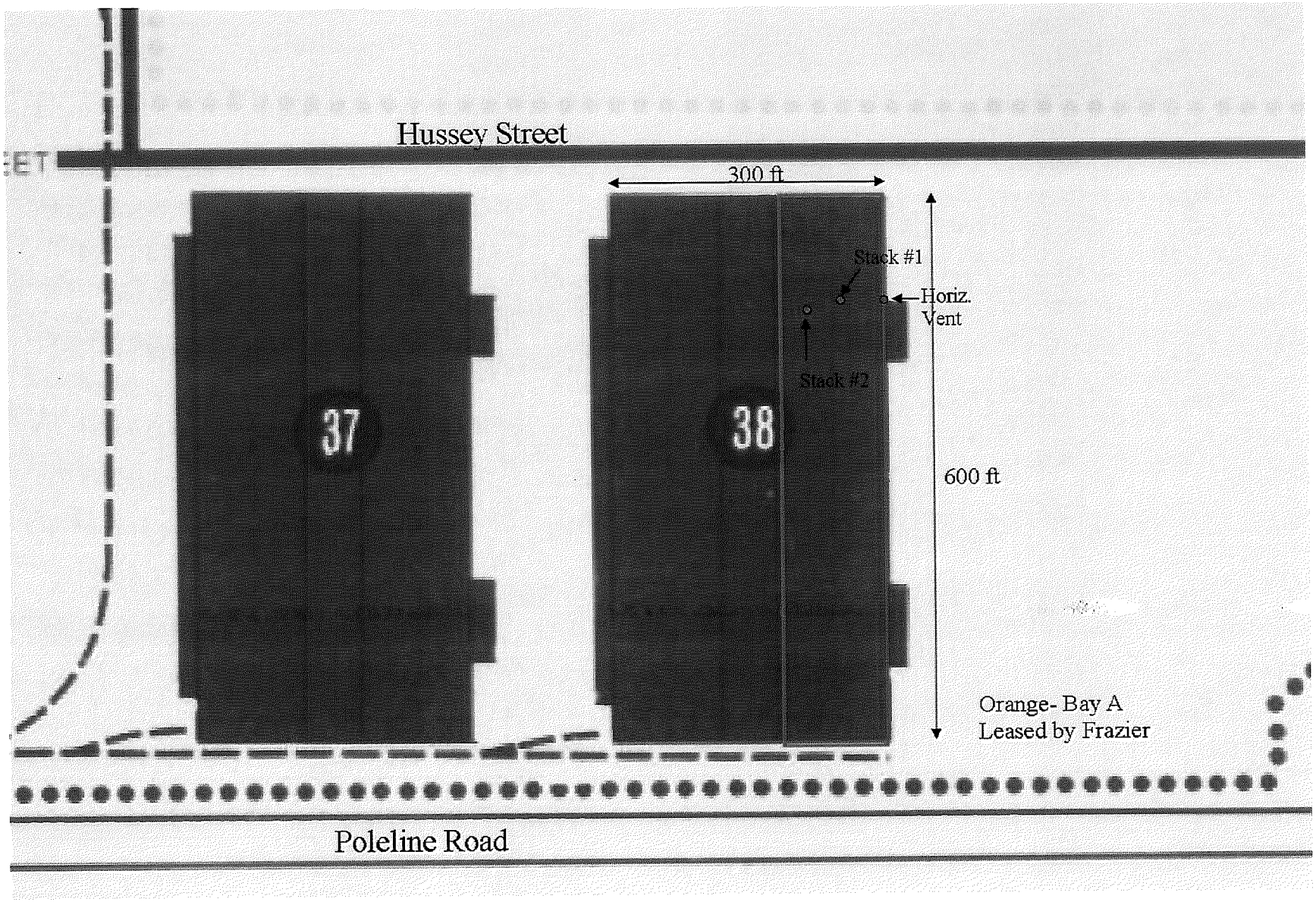


Figure 2 shows the location of the facility. Highlighted in bright orange is Bay A which is leased by Frazier. The dotted lines in the figure represent fenced areas on three sides, and the building prevents access from the fourth side, the north, except along two small alleys to the east and west.

Figure 2 Facility Buildings, and Public Access Limits



Because the TAP could be exhausted out any of the vents, this analysis includes three SCREEN3 runs, assuming 100% of the potential emissions are exhausted out each of the three vent options. The analysis demonstrates that none of the venting options individually will lead to ambient impacts approaching the IDAPA 585 AACC impact limit. Therefore, any combination of venting options is shown to not approach or exceed ambient impact limits.

Horizontal stack release was modeled as recommended by IDEQ, with exhaust flow rate set to 0.001 m/sec and stack diameter set to 0.001m consistent with IDEQ Modeling Guidelines recommendations for horizontal stacks. All other model parameters were set to actual conditions for the two vertical stacks. The two vertical stacks each have a McMaster-Carr belt-drive axial duct fan. A copy of the McMaster-Carr fan specifications sheet is included in Attachment A of this modeling report. The fan specification sheet was used to determine the exhaust flow rate from Stacks #1 and #2. The exhaust temperature is assumed to be ambient as the warehouse temperature is usually very close to the ambient temperature. The warehouse itself is not heated or cooled throughout the year. In addition, all modeling parameters are shown in the six SCREEN3 output files included in Attachment B.

1.4 Model Domain, Mapping, and Receptor Network

The SCREEN3 model uses a simple two dimensional grid. The nearest model receptor was set at the shortest distance to ground onsite or offsite, consistent with IDEQ recommendations. The nearest receptors were right alongside the building, inside a fenceline in areas Frazier controls access to via a fence on three sides and their building to the north. The only access to anyone other than Frazier is along Hussey Street, which is a narrow alleyway north of the warehouse. The nearest ambient air receptors used for modeling are located in the area to the south of Building 38 which is a parking lot and product storage yard, to which access is limited to authorized personnel. The facility reserves the right to use an ambient boundary consistent with IDEQ guidance and precedent in any future analysis.

The nearest distance to off building locations for the three stacks was conservatively estimated at 5 meters for Stack1 and the wall vent, 26.3 meters for Stack 2, and 1 meter for the Horizontal Vent. Simple terrain was used because there is no elevated terrain in the industrial park, and building downwash considerations and urban dispersion coefficients made impacts drop off quickly away from the source.

1.5 Elevation Data

As described above, simple terrain representative of the area around the industrial park where was used.

1.6 Meteorological Data

The full meteorological data set representing worst-case hourly conditions built into SCREEN3 was used for this analysis. Maximum predicted one hour average impacts were well below the IDAPA 585 AAC, and as a conservative approach no persistence factor was used to reduce predicted impacts to daily averages using persistence factors.

1.7 Land Use Classification

The model includes rural and urban algorithm options. These options affect the wind speed profile, dispersion rates, and mixing-height formula used in calculating ground-level pollutant concentrations. A protocol was developed by USEPA to classify an area as either rural or urban for dispersion modeling purposes. The classification is based on average heat flux, land use, or population density within a three-km radius from the plant site. Of these techniques, the USEPA has specified that land use is the most definitive criterion (USEPA, 1987). The urban/rural classification scheme based on land use is as follows:

> *The land use within the total area, A_0, circumscribed by a 3-km circle about the source, is classified using the meteorological land use typing scheme proposed by Auer (1978). The classification scheme requires that more than 50% of the area, A_0, be from the following land use types in order to be considered urban for dispersion modeling purposes: heavy industrial (I1); light-moderate industrial (I2); commercial (C1); single-family compact residential (R2); and multi-family compact residential (R3). Otherwise, the use of rural dispersion coefficients is appropriate.*

Initial modeling was conducted with the use of urban dispersion coefficients. Consistent with IDEQ's request, analyses were prepared for both rural and urban dispersion coefficients. The results of both analyses are presented in Attachment B, and the higher impacting of the two scenarios is compared against applicable impact standards.

1.8 Background Concentrations

IDEQ regulations do not require background concentrations to verify compliance with TAP ambient impact limits.

1.9 Evaluation of Compliance with Standards

The ambient air quality impact limit applicable for this analysis is the IDAPA 585 AAC for Tri methylbenzene. That 24-hour average ambient limit applies to the maximum 24-hour average impact predicted as a result of proposed increases in TAP emissions. Table 1 provides a comparison of TAP impacts with applicable impact limits, with the IDEQ persistence factor of 0.4 used to convert SCREEN3 predicted 1-hour average maximum impacts to conservative 24-hour average impact projections.

Table 1
Ambient Impact Limits & Comparison of Predicted Impacts with Applicable Ambient Standards

Pollutant	Avg. Period	Modeled Worst Case Impact Urban 1 hr avg ($\mu g/m^3$)	Modeled Worst Case Impact Rural 1 hr avg ($\mu g/m^3$)	Modeled Worst Case Impact 24 hr avg ($\mu g/m^3$)	NAAQS ($\mu g/m^3$) Or AAC, AACC for TAPs	Distance To Highest Model Impact
Tri methylbenzene Stack 1	24	2204	2326	930	6150	40 m
Tri methylbenzene Stack 2	24	450.6	513.7	205.5	6150	130 m
Tri methylbenzene wall vent	24	6281	6281	2512	6150	40 m

Maximum predicted impacts for all pollutants and averaging periods occurred within 40 meters of the horizontal wall vent. They were likely caused or affected by building downwash.

Table 1 shows that predicted maximum one hour average ambient concentrations resulting from increases in TAP emissions are well below the applicable impact limits even before application of persistence factors to calculate 24-hour averages consistent with the IDAPA AAC.

1.10 Copies of the Modeling Input and Output Data Files

Appendix B includes complete SCREEN3 output files for each of the three modeling runs, one for each possible TAP vents location. Those files show all model input and output, and are sufficient for IDEQ duplication of the analyses described.